IN THE CLAIMS:

1.-2. (Cancelled)

3. (Currently Amended) An in-substrate selective electrochemical treatment system for finding and repairing pinholes in an active substrate comprising:

holding means for holding an insulating substrate;

an electrode for connection at a periphery of an insulating substrate being held by the holding means, to a conductive pattern located on such an insulating ~~substrate~~ substrate, said electrode being covered with an insulating layer;

chemical solution confining means for confining a chemical solution to only a specified region on an insulating substrate, the specified region being smaller than an insulating substrate or slightly larger than an image displaying section on an active substrate formed on an insulating substrate;

a reversed polarity electrode plate for applying an electric charge to the chemical solution, the electric charge having polarity opposite to an electric charge of said electrode;

chemical solution supplying and discharging means for supplying and discharging the chemical solution to and from an insulating substrate; and

means for detecting at least one pinhole in said insulting layer comprising means for measuring the value of a current flowing between said electrode and said reversed polarity electrode plate.

4. (Previously Presented) An in-substrate selective electrochemical treatment system according to Claim 3,

wherein the reversed polarity electrode plate comprises a double-purpose reversed polarity electrode plate having a specified size and shape smaller than an insulating substrate slightly larger than the image displaying section of an active substrate formed on an insulating substrate, the double-purpose reversed polarity electrode plate also comprising the chemical solution confining means for confining the chemical solution in a gap obtained by locating the double-purpose reversed polarity electrode plate close to an insulating substrate.

5. (Previously Presented) An in-substrate selective electrochemical treatment system according to Claim 3,

wherein the reversed polarity electrode plate is a double-purpose reversed polarity electrode plate, which is smaller than an insulating substrate, or slightly larger than the image displaying section of an active substrate formed on an insulating substrate, and which also comprises the chemical solution confining means further comprising a porous soft material plate having a surface facing an insulating substrate and impregnated with the chemical solution.

6. (Currently Amended) An in-substrate selective electrochemical treatment system according to Claim 3,

wherein the reversed polarity electrode plate has a specified size and shape smaller than an insulating substrate or slightly larger than the image displaying section of an active substrate formed on an insulating substrate; and

wherein the chemical solution confining means comprises a frame-shaped container ~~type~~ chemical solution confining means which has, at upper and lower ends thereof, an opening slightly

larger than the reversed polarity electrode plate having the specified size and shape and comprises a frame-shaped container in which a flexible sealing material is attached to an area around the opening at the lower end;

the treatment system further comprising pressing means for pressing the frame-shaped container chemical solution confining means against an insulating substrate, with the reverse polarity electrode plate being located within the frame-shaped container chemical solution confining means.

7. (Currently Amended) An in-substrate selective electric chemical treatment system according to Claim 3,

wherein the chemical solution confining means is a ~~box~~frame-shaped container ~~type~~ chemical solution confining means for retaining the reversed polarity electrode plate therein and comprises a ~~box~~frame-shaped container having a flexible sealing material embedded in an open end thereof that is smaller than an insulating substrate slightly larger than the image displaying section of an active substrate formed on an insulating substrate;

the treatment system further comprising pressing means for pressing the ~~box~~frame-shaped container chemical solution confining means against an insulating substrate through the sealing member.

8. (Previously Presented) An in-substrate selective electrochemical treatment system according to Claim 6, further comprising washing means for washing, with a washing liquid, the chemical solution away from a chemical solution treatment space after completion of inspection, the chemical solution treatment space comprising the frame-shaped container chemical solution confining means pressed against an insulating substrate.

9. (Previously Presented) An in-substrate selective electrochemical treatment system according to Claim 4, further comprising electrode plate temperature controlling means for controlling the temperature of the reversed polarity electrode plate by flowing temperature-controlling liquid within the reversed polarity electrode plate.

10. (Currently Amended) An in-substrate selective electrochemical treatment system according to Claim 6, further comprising:

chemical solution circulating means for circulating the chemical solution within the chemical solution treatment space defined by the frame-shaped container chemical solution confining means or the ~~box~~frame-shaped container chemical solution confining means pressed against an insulating substrate; and

chemical solution temperature controlling means for controlling the temperature of the chemical solution.

11. (Currently Amended) An electrochemical treatment process for treating a substrate by use of an in-substrate selective electrochemical treatment system for finding and repairing pinholes of an active substrate, comprising holding means for holding an insulating substrate; an electrode for connection at a periphery of an insulating substrate being held by the holding means, to a conductive pattern located on such an insulating substrate, said electrode being covered with an

insulating layer; chemical solution confining means for confining a chemical solution to only a specified region, the specified region being smaller than an insulating substrate or slightly larger than an image displaying section on an active substrate formed on an insulating substrate; a reversed polarity electrode plate for applying an electric charge to the chemical solution, the electric charge having polarity opposite to an electric charge of said electrode; and chemical solution supplying and discharging means for supplying and discharging the chemical solution to and from an insulating substrate, the treatment process comprising:

holding an insulating substrate having a conductive pattern on the holding means;

supplying a predetermined amount of a specified chemical solution to a specified region on an insulating substrate and confining the solution to the specified region;

locating the reversed polarity electrode plate close to an insulating substrate such that the reversed polarity electrode plate comes in contact with the chemical solution which is on an upper surface of an insulating substrate;

bringing the electrode into contact with a conductive pattern in the periphery of an insulating substrate;

applying a specified direct current between said electrode and said reversed polarity electrode plate; and

measuring the value of a current flowing between said electrode and said reversed polarity electrode plate for detecting at least one pinhole in said insulting layer.

12. (Currently Amended) An electrochemical treatment process for treating a substrate by use of an in-substrate selective electrochemical treatment system for finding and repairing pinholes of an active substrate, comprising holding means for holding an insulating substrate; an electrode for connection at a periphery of an insulating substrate being held by the holding means, to a conductive pattern located on such an insulating substrate, said electrode being covered with an insulating layer; a reversed polarity electrode plate having a specified size and shape smaller than an insulating substrate or slightly larger than an image displaying section on an active substrate formed on an insulating substrate; container ~~type~~

chemical solution confining means comprising a frame-shaped ~~or box-shaped~~ container having, at a lower end or upper and lower ends thereof, an opening slightly larger than such a reversed polarity electrode plate and having a flexible sealing material attached to an area around the opening at the lower end; and pressing means for pressing the container ~~type~~ chemical solution confining means against an insulating substrate, with the reversed polarity electrode plate being stored in the container ~~type~~ chemical solution confining means, the treatment process comprising:

holding an insulating substrate having a conductive pattern on the holding means;

supplying a specified chemical solution to a space defined by the container ~~type~~ chemical solution confining means and an insulating substrate;

connecting the electrode to the conductive pattern in the periphery of an insulating substrate;

applying a specified direct current between the electrode and the reversed polarity electrode plate; and

measuring the value of a current flowing between said electrode and said reversed polarity electrode plate for detecting at least one pinhole in said insulting layer.

13. (Withdrawn) A liquid crystal device comprising an insulating substrate and a liquid crystal packed between the insulating substrate and an opposed substrate or color filter, the insulating substrate having, on one main surface,

a plurality of scan lines each composed of one or more metal layers, or either or both of common capacitance lines and opposed electrodes in addition to scan lines;

a plurality of signal lines each composed of one or more metal layers and crossing the scan lines at right angles through one or more insulating layers;

an insulated gate transistor provided for every crossover point at which a scan line and a signal line cross each other; and

at least one pixel electrode connected to a drain of the insulated gate transistors;

wherein pinholes of the insulating layer formed on lines are filled up with an insulating material, the lines excluding the signal lines and drain lines but including the scan lines, or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines.

14. (Withdrawn) A liquid crystal device according to Claim 13,

wherein the scan lines or either or both of the common capacitance lines and the opposed electrode in addition to the scan lines on the substrate are made from a metal that can be anodized, and

wherein the bottoms of the pinholes of the insulating layer, which covers the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines, are filled up with an anodic oxide of said metal.

15. (Withdrawn) A liquid crystal device according to Claim 13, wherein pinholes of the insulating layer formed on the scan

lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines are filled up with an organic insulating material by electrodeposition.

16. (Withdrawn) A process of inspecting an active substrate in a liquid crystal device comprising an insulating substrate and a liquid crystal packed between the insulating substrate and an opposed substrate or color filter, the insulating substrate having, on one main surface,

a plurality of scan lines each composed of one or more metal layers, or either or both of common capacitance lines and opposed electrodes in addition to scan lines;

a plurality of signal lines each composed of one or more metal layers and crossing the scan lines at right angles through one or more insulating layers;

an insulated gate transistor provided for every crossover point at which a scan line and a signal line cross each other; and

at least one pixel electrode connected to a drain of the insulated gate transistors;

the process comprising:

a holding step of holding the insulating substrate, with the surface where the scan lines and the signal lines exist facing up;

an electrode connecting step of connecting an electrode to the scan lines of the held insulating substrate;

a chemical solution confining step of retaining, on the held insulating substrate, a reversed polarity electrode plate having a polarity opposite to the polarity of said electrode and confining an electrolytic solution between the reversed polarity electrode plate and a specified position on the insulating substrate; and

a pinhole detection step of inspecting the presence or absence of pinholes on the insulating layer formed on the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines by a current measurement which is made by applying an electric field between the reversed polarity electrode plate and the scan lines, or either or both of the common capacitance lines and the opposed

electrodes in addition to the scan lines, while coordinating with the chemical solution confining step.

17. (Withdrawn) A process of repairing an active substrate in a liquid crystal device comprising an insulating substrate and a liquid crystal packed between the insulating substrate and an opposed substrate or color filter, the insulating substrate having, on one main surface,

a plurality of scan lines each composed of one or more metal layers, or either or both of common capacitance lines and opposed electrodes in addition to scan lines;

a plurality of signal lines each composed of one or more metal layers and crossing the scan lines at right angles through one or more insulating layers;

an insulated gate transistor provided for every crossover point at which a scan line and a signal line cross each other; and

at least one pixel electrode connected to a drain of the insulated gate transistors;

the process comprising:

a holding step of holding the insulating substrate, with the surface where the scan lines and the signal lines exist facing up;

an electrode connecting step of connecting an electrode to the scan lines of the held insulating substrate;

a chemical solution confining step of retaining, on the held insulating substrate, a reversed polarity electrode plate having a polarity opposite to the polarity of said electrode and confining a chemical solution between the reversed polarity electrode plate and a specified position on the insulating substrate; and

an inactivating step of electrically inactivating a scan line within a pinhole of the insulating layer formed on the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines or electrically inactivating either or both of a common capacitance line and an opposed electrode in addition to a scan line within the pinhole, the electric inactivation being carried out by applying an electric field between the reversed polarity electrode plate and the scan lines or either or both of the common capacitance lines

and the opposed electrodes in addition to the scan lines, while coordinating with the chemical solution confining step.

18. (Withdrawn) An active substrate repairing process according to Claim 17,

wherein the inactivating step is an anodic oxidation step of anodizing the scan line or either or both of the common capacitance line and the opposed electrode in addition to the scan line within the pinhole of the insulating layer formed on the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines, by applying an electric field between the reversed polarity electrode plate and an active substrate in which the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines are each made of a metal layer that can be anodized.

19. (Withdrawn) An active substrate repairing process according to Claim 17,

wherein the chemical solution confining step is an electrodeposition solution confining step of confining an insulating organic electrodeposition solution as the chemical solution, and

wherein the inactivating step is an filling-up insulation step of filling the pinhole of the insulating layer, which is formed on the scan lines or on either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines, up with an organic insulating material, by applying an electric field between the reversed polarity electrode plate and the insulating layer having the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines.

20. (Withdrawn) An active substrate repairing process according to Claim 17,

wherein the inactivating step is an electric corrosion step of electrically corroding the scan line or either or both of the common capacitance line and the opposed electrode in addition to the scan line within the pinhole of the insulating layer formed

on the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines, by applying an electric field between the reversed polarity electrode plate and an active substrate in which the scan lines or either or both of the common capacitance lines and the opposed electrodes in addition to the scan lines are each made of a metal layer that can be electrically processed.

21. (Currently Amended) An in-substrate selective electrochemical treatment system according to Claim 7, further comprising fluid supply and discharge means for supplying and discharging at least one of a chemical solution, washing liquid and drying gas to and from the ~~box~~frame-shaped container.

22. (Currently Amended) A chemical treatment process for a substrate by use of an in-substrate selective chemical treatment system comprising a stage for holding an insulating substrate, a ~~box~~frame-shaped container ~~in which~~ comprising a flexible sealing material ~~is~~ embedded around an open end thereof and located in a region that is smaller than ~~an~~ such insulating substrate or

slightly larger than an active substrate formed on ~~an~~ such insulating substrate, the open end being smaller than said region, the frame-shaped container having a chemical solution port and a chemical solution discharge port, a mechanism for pressing the ~~box~~frame-shaped container against an insulating substrate, and a mechanism for supplying and discharging a chemical solution, pure water or drying gas to and from the pressed ~~box~~frame-shaped container, the process comprising:

holding an insulating substrate on the stage;

pressing the ~~first~~ frame-shaped container against an insulating substrate;

applying a specified chemical treatment to an insulating substrate by supplying the chemical solution to the ~~box~~frame-shaped container through the chemical solution port, the chemical solution being circulated between the chemical solution port and the chemical solution discharge port;

washing the inside of the ~~box~~frame-shaped container and an insulating substrate by supplying a washing fluid to them after discharge of the chemical solution; and

drying the inside of the first container and an insulating substrate by supplying drying gas to them after discharge of the washing fluid.

23. (Withdrawn) A substrate having a conductive pattern, wherein pinholes of an insulating film formed on metallic signal lines are insulated by an oxide of the metal of the metallic signal lines.

24. (Withdrawn) A substrate according to Claim 1, which is for use in a display device having a liquid crystal, an optical shutter or an optical logic element.